

PO Job Risk Assessment

Name(s) of Risk Team Members: All "Electrical 1" Workers - R. Gill (facilitator)	Point Value → Parameter ↓	1	2	3	4	5
Job Title: Electrical Work – Routine Job Number or Job Identifier: PO-JRA-006	Frequency (B)	≤once/year	≤once/month	≤once/week	≤once/shift	>once/shift
Job Description: Routine low energy electrical work <300 Volts	Severity (C)	First Aid Only	Medical Treatment	Lost Time	Partial Disability	Death or Permanent Disability
Training and Procedure List (Optional):	Likelihood (D)	Extremely Unlikely	Unlikely	Possible	Probable	Multiple
Rev. #: 1	Date: April 21, 2006					
Stressors (if applicable, please list all):		Reason for Revision (if applicable): Electrical arc flash injury in CAD prompts review.			Comments:	

				Before Additional Controls							After Additional Controls					
Job Step / Task	Hazard	Control(s)	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	Control(s) Added to Reduce Risk	Stressors Y/N	# of People A	Frequency B	Severity C	Likelihood D	Risk* AxBxCxD	% Risk Reduction
Troubleshooting, testing <50 VDC electronics	Arc flash from high current device	Training, proper grounding, NRTL equipment rating, proper testing equipment, covered outputs	N	1	3	3	2	18	Low potential: severity overestimated. Increased PPE to include safety glasses.	N	1	3	1	2	6	67%
	Reflex injury	Training, proper grounding, NRTL equipment rating, proper testing equipment, covered outputs	N	1	3	2	1	6	Increased PPE to include safety glasses.	N	1	3	1	1	3	50%

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Troubleshooting, testing <300 VAC electronics and electrical equipment	Electrocution	Training, proper grounding, NRTL equipment rating, proper testing equipment, covered outputs, covered AC inputs, working hot permits, 70E compliant PPE	N	1	2	5	2	20	Enhanced PPE.	N	1	2	2	1	4	75%
	Electrical shock	Training, proper grounding, NRTL equipment rating, proper testing equipment, covered outputs, covered AC inputs, working hot permits, 70E compliant PPE	N	1	2	3	2	12	Enhanced PPE.	N	1	2	2	1	4	67%
	Arc flash	Training, proper grounding, NRTL equipment rating, proper testing equipment, covered outputs, covered AC inputs, working hot permits, 70E compliant PPE	N	1	2	4	2	16	Enhanced PPE.	N	1	2	2	2	8	50%
	Reflex injury	Training, proper grounding, NRTL equipment rating, proper testing equipment, covered outputs, covered AC inputs, working hot permits, 70E compliant PPE, clear work area, Tier 1 inspections	N	1	2	3	1	6	Enhanced PPE.	N	1	2	2	1	4	33%

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Inserting or removing electronic modules (NIM, CAMAC, VME, etc.)	Reflex injury	Training, proper grounding, NRTL equipment rating, covered outputs	N	1	4	1	1	4	Modules are never inserted or removed with power on.	N	1	1	1	1	1	75%
	Arc flash	Training, proper grounding, NRTL equipment rating, covered outputs	N	1	4	3	1	12	Modules are never inserted or removed with power on. Arc flash severity was overestimated	N	1	1	1	1	1	92%
Connecting cables between modules and power supplies	Electrical shock	Training, proper grounding, proper connectors and cable for voltage and current used, de-energize before connecting	N	1	4	1	2	8	Enhanced PPE.	N	1	4	1	1	4	50%
	Reflex injury	Training, proper grounding, proper connectors and cable for voltage and current used, de-energize before connecting	N	1	4	1	2	8	Enhanced PPE.	N	1	4	1	1	4	50%
	Cuts and abrasions from cables and connectors	Gloves, proper tools	N	1	4	1	2	8								
Operation of circuit breakers	Electrical shock	Training, proper grounding, 70E compliant PPE	N	1	2	2	1	4	Enhanced PPE.	N	1	2	1	1	2	50%
	Arc flash	Training, proper grounding, 70E compliant PPE	N	1	2	3	1	6	Enhanced PPE.	N	1	2	2	1	4	33%
	Reflex injury	Training, proper grounding, 70E compliant PPE	N	1	2	2	1	4	Enhanced PPE.	N	1	2	1	1	2	50%

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Further Description of Controls Added to Reduce Risk: Enhanced PPE: PPE now includes gloves, safety glasses and long-sleeved natural fiber shirt and long natural fiber pants for operation of circuit breakers and AC electrical work included here. Training means BNL's Electrical Safety 1 training course.																
*Risk:	0 to 20 Negligible	21 to 40 Acceptable	41 to 60 Moderate					61 to 80 Substantial			81 or greater Intolerable					